ETCR035AD Clamp AC/DC Current Sensor

User Manual

Thanks for your purchase of ETCR035AD Clamp AC/DC Current Sensor of our company.
For better use of the product, please make sure:

---to read this user manual in details.

---to abide by the safety regulations and precautions strictly.

- **u** Under any circumstance, it shall pay special attention on safety in use of this sensor.
- **u** Pay attention to words and symbols stick on the panel.
- **u** Keep the pliers clean, maintenance regularly.
- **u** Stop using the sensor when there is a rupture or break.
- **u** When the power voltage is low, please to replace the battery in time. If you expect not to use the sensor for a long time, please take out batteries.
- **u** When changing batteries, please pay attention to the polarity of battery. Notice the positive and negative when connecting external power supply.
- **u** Please don't keep or store the sensor in the spot with high-temperature and moisture, or condensation, and under direct daylight radiation for a long time.
- **u** This sensor is only to be used, disassembled, and repaired by qualified personnel with authorization.
- **u** When it may cause hazard by continuous use for the reason of the sensor itself, it shall immediately stop using it and deposit it at once, leaving it for disposal by authorized agency.
- **u** For risk of danger icon in manual ", users must perform safety operations strictly in compliance with the manual content.

Ⅰ. Introduction

ETCR035AD Clamp AC/DC Current Sensor is used for measurement of AC/DC current, phase, power energy, power, power factor. Adopt the latest CT technology, without any bare metal conductor on clamp. It is portable, clamp design, no need to disconnect the measured circuits, non-contact, safe and fast. The clamp core is made of special alloy, to ensure the high precision, high stability and high reliability of perennial uninterrupted measurement. It can be connected with phase detection analyzer, industrial control equipment, data recorder, oscilloscope, harmonic analyzer, electric power quality analyzer, high precision digital multi-meter, etc. Widely applied in electricity, communication, meteorology, railway, oilfield, construction, measurement, scientific and research teaching unit, industrial and mining enterprises.

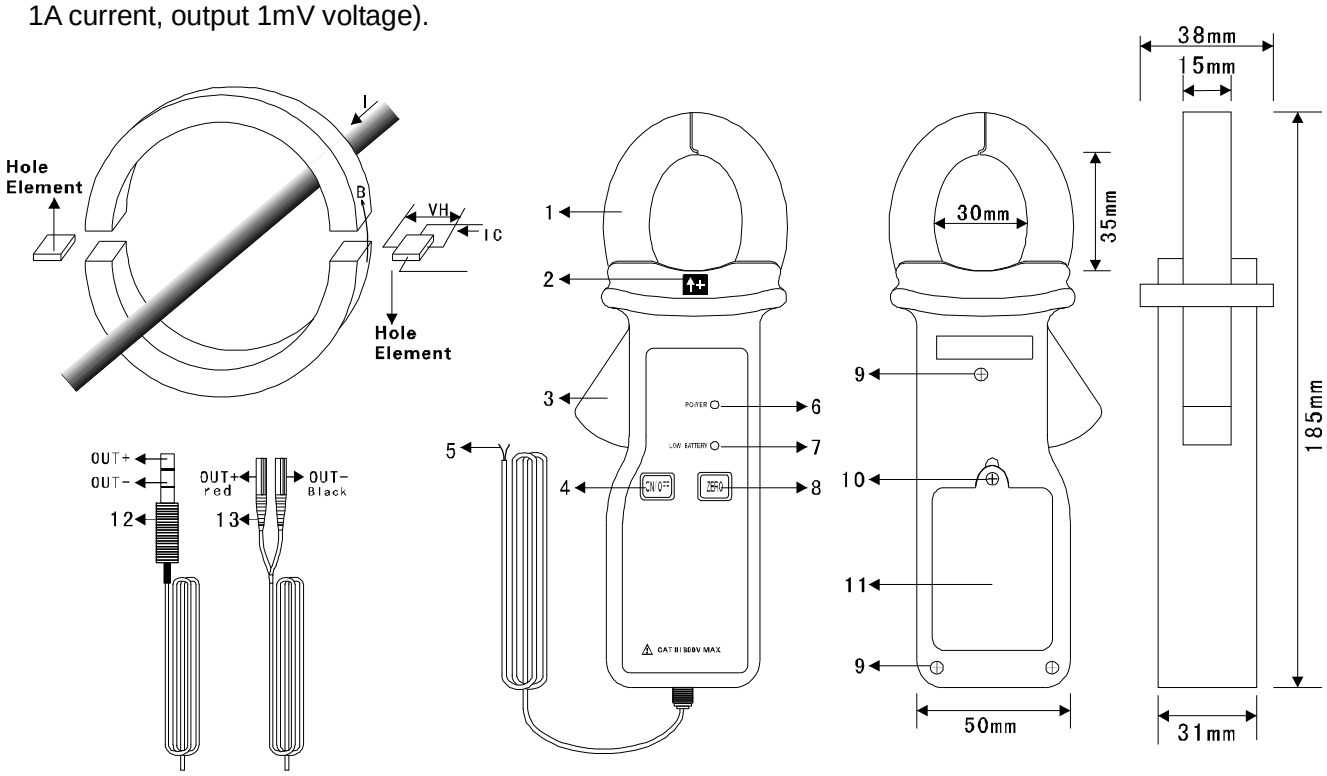
Ⅱ. Technical Specifications

Function	Measurement of AC/DC current, phase, power energy, power, power factor
Power Supply	Zn-Mn dry battery, 6F22 9VDC (can connect external power supply)
Rated Power	5mW
Test mode	Clamp CT
Clamp Size	30mm×35mm
Range	0-600A AC/DC
Resolution	0.1A AC/DC
Signal Output	1mV/1A (0-600A/0-600mV DC/AC)
Accuracy	±1.0%FS(23℃±2℃, below 70%RH, keep the wire be in the center of clamp)
Phase Error	≤3°(AC 50Hz/60Hz; 23℃±2℃)
Zero Clearing	Press ZERO button to clearing, eliminate the influence of magnetic field on the DC testing
Output Wire Connection	Standard connection: Red wire: positive signal output; Yellow wire: negative signal output
Output Wire Length	2m
Measured Wire Position	Approximately in the geometric center of the clamp

Frequency Response	AC 45Hz-400Hz
Line Voltage	Under 600V DC measurement
Battery Voltage	LED lights up indicating low power when the battery voltage decrease to 7.2V. Then the battery have to be changed
Dimension	122mm×70mm×33mm
Weight	180g (with battery)
Working Environment	-15℃-45℃; below 80%rh
Storage Environment	-10℃-60℃; below 70%rh
Insulation Strength	AC3700V/rms (between core and shell)
Safety Rules	IEC1010-1, IEC1010-2-032, Pollution degree 2, CAT Ⅲ(600V)

Ⅲ. Principle and Structure

Combining partition type iron core with hall element, makes it capable of measuring AC current and DC current simultaneously. The hall element induced output a hall voltage **VH**, which is generate by the measured current **I**, so the measured current I can be calculated by measuring **VH**. Signal Output: 1mV/1A (input every 1A current, output 1mV voltage).



1. Clamp 2. DC current positive input indicator
3. Trigger (open and close the clamp) 4. **ON/OFF** button，power key
5. Standard output wire: (red wire: positive output signal; yellow: negative output signal)
6. Power on indicator 7. Low battery voltage indicator 8. **ZERO** clearing button
9. Cover connection screw (3 pcs) 10. Battery cover fixed screw 11. Battery cover
12. Sensor output plug (3.5mm audio plug, optional)
13. Sensor output plug (Standard multimeter plug, optional)

⚠ ***Manufactured by***

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